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EXAMINER

MAKI, STEVEN D

ART UNIT PAPER NUMBER

1733

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/036,691

Applicant(s)

TAYLOR, FREDRICK

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5,8-12 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5,8-12 and 15-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1) Upon reconsideration and in view of the new cited Kirk Othmer, the indication of allowable subject matter in paragraph 8 of the last office action dated 11-19-03 has been withdrawn.

2) Claim 5 is objected to because of the following informalities: on line 7, "way" should be --wax--. Appropriate correction is required.

3) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4) Claims 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16 (indirectly dependent on claim 8), it is unclear if this claim broadens claim 8 by removing the limitations regarding the specified phr.

As to claim 17 (indirectly dependent on claim 8), it is unclear what additional limitation is being claimed since the specified parts by weight are already recited in claim 8.

5) Claims 16 and 17 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 16 (indirectly dependent on claim 8) broadens claim 8 by omitting the limitations in claim 8 of the specified phr.

As to claim 17 (indirectly dependent on claim 8), this limitation is already required by claim 8.

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7) **Claims 8-12, 15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain '870 (GB 2239870) in view of Japan '104 (JP 64-74104), Europe '137 (EP 708137) and Sandstrom et al (US 5216066).**

Great Britain '870 discloses a "non-marking" (non-discoloring) rubber composition for a tire comprising:

**natural rubber;**

**styrene butadiene rubber (synthetic rubber);**

**polybutadiene rubber;**

reinforcing filler such as carbon black;

processing aids including **paraffinic oil (rubber oil);**

liquid polyisoprene (synthetic rubber)

vulcanizing agents.

See page 2 second paragraph. The paraffinic oil is used instead of an aromatic oil so that a vulcanizate made from the composition does stain a floor surface / cause discolorization. See page 1 last paragraph and page 2 last full paragraph. The rubber composition can be used in a tire so that the tire does not stain the floor. See page 2

first full paragraph and page 1 last full paragraph. Great Britain '870 does not specifically recite that the non-marking rubber composition is in a tread of the tire. However, it would have been obvious to one of ordinary skill in the art to use Great Britain '870's nonmarking composition in a tread of a tire since (a) Great Britain '870 suggests using the composition in a tire so that the tire will not stain a floor and (b) Japan '104 and Europe '137 teach using a non-marking composition in a tread so that the tire having such a tread will not mark a floor. With respect to the claimed curing step, Japan '104 suggests forming a tire having a tread by applying a tread to a casing (green tire) and then vulcanizing the tire assembly. Great Britain '870 does not recite including "ethylene propylene rubber" in the rubber composition.

As to claims 8 and 12, it would have been obvious to one of ordinary skill in the art to include ethylene propylene rubber in the *nondiscoloring* tread rubber composition since Sandstrom et al teaches including a **sulfonamide modified EPDM terpolymer ("ethylene propylene rubber")** in addition to other rubbers such as natural rubber and polybutadiene in a tire tread composition to improve abrasion resistance, ozone resistance and hysteresis and to reduce the amount of amine antizonant and thereby produce a *nonstaining* tire tread. In claim 8, "ethylene propylene rubber" reads on a sulfonamide modified EPDM terpolymer as disclosed by Sandstrom et al. The claimed rubber amounts of 30-70 parts natural and synthetic rubber and 20-50 parts ethylene propylene rubber would have been obvious and could have been determined without undue experimentation in view of: (a) Great Britain '870's teaching to use natural and synthetic rubber and polybutadiene rubber in the non-discoloring rubber composition

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and (b) Sandstrom et al's teaching to use upto 80 parts of one or more diene rubbers, 10-60 parts of a polybutadiene and 10-80 parts of the modified EPDM in the tire tread composition. The claimed rubber oil amount of 7.5-12.5 would have been obvious and could have been determined without undue experimentation in view of Great Britain '870's teaching to use the paraffinic oil (rubber oil) as a process aid. As to reinforcing filler, it would have been obvious to one of ordinary skill in the art to use carbon black and silica (white carbon) in the nonmarking tread composition (and in particular use 11-60 parts carbon black and 11-60 parts silica) in view of (a) Great Britain '870's teaching to use one or more fillers such as carbon black in the nonmarking composition and (b) Europe '137's teaching to use silica and carbon black in a 1:1 ratio in a nonmarking composition for a tire tread.

As to claim 9, it would have been obvious to include the claimed zinc oxide, tackifier, microcrystallized wax, antioxidant and antiozonant in the claimed amounts in Great Britain '870's composition since (a) Great Britain '870 teaches that the composition may include zinc oxide, antioxidant and wax (mixture A page 3); microcrystallized wax being taken as well known / conventional type of wax and (b) Sandstrom et al teaches that a tread composition may also include zinc oxide, tackifiers, antioxidants and antiozonants (col. 6 lines 49-61).

As to claim 10, it would have been obvious to color Great Britain '870's composition so that the tread is a colored nonmarking tread since Japan '104 suggests that a colorant may be included in a nonmarking composition for a tread.

As to claim 11, Japan '104 suggests vulcanizing the tire.

As to claim 15, Great Britain '870 suggests using polybutadiene in the nonmarking rubber composition.

As to claim 17, see comments on claim 8.

As to claim 18, see comments on claim 9.

As to claim 19, it would have been obvious to provide Great Britain '870's tire as a bias tire since a bias tire is taken as a well known / conventional construction for a tire.

As to claim 20, it would have been obvious to color Great Britain '870's composition so that the tread is a colored nonmarking tread since Japan '104 suggests that a colorant may be included in a nonmarking composition for a tread.

**8) Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain '870 (GB 2239870) in view of Japan '104 (JP 64-74104), Europe '137 (EP 708137) and Sandstrom et al (US 5216066) as applied above and further in view of Kirk-Othmer.**

As to claims 5 and 16, it would have been obvious to include the remaining claimed ingredients in Great Britain '870's rubber composition in view of Kirk-Othmer's teaching to provide a rubber composition with vulcanizing agents such as insoluble sulfur; several accelerators such as mercaptobenzothiazoles, sulfenamides and thiurams to control vulcanization; antioxidants and antiozonants to extend the service life; tackifiers for better tire building; and zinc oxide and stearic acid to activate the curing system as well as to preserve cured properties when overcuring. Although "consists" in claims 5 and 16 is closed language, claims 5 and 16 fail to exclude the liquid polyisoprene since "synthetic rubber" is sufficiently broad so as to read on liquid

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polyisoprene. Furthermore, it is noted that the obviousness conclusions regarding amounts are not required for at least claim 5.

Remarks

9) Applicant's arguments with respect to claims 5, 8-12 and 15-20 have been considered but are moot in view of the new ground(s) of rejection. This office action is non-final since the new ground of rejection was not necessitated by amendment.

Applicant's arguments filed 3-22-04 have been fully considered but they are not persuasive.

German 19653371 is cited of interest for teaching a non black bicycle tread comprising 20-50 phr SBR, 20-40 ethylene propylene diene copolymer (EPDM), and 10-60 parts natural rubber and 30-70 phr silica.

Wirth (US 3658639) is cited of interest for (1) the discussion of the incompatibility of highly saturated rubbers and EPDM rubbers and (2) the teaching to use a rubber composition comprising a "special EPDM rubber" in a tire (col. 2 line 54).

Europe 864447 is cited of interest for teaching the use of "ethylene-propylene-diene terpolymers" (page 6 lines 28) in a tire tread.

10) No claim is allowed.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone




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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
June 27, 2004

  
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6-27-04